Action Item Summary
EPA Technical Meeting #4

January 12, 2015: 10:00 am – 12:00 pm

DWR – Bonderson Bldg | 901 P Street, Room 422, Sacramento CA 95814

I. Introductions:

In-person attendees: Cassandra Enos (DWR), Ken Bogdan (DWR) Tim Vendlinski (EPA), Stephanie Skophammer (EPA), Erin Foresman (EPA), Steve Centerwall (ICF), , Marc Ebbin (EMS), Larry Rabin (USFWS), Cathy Marcinkevage (NMFS),

Telephone attendees: David Zippin (ICF), Dan Hytrek (NMFS), Peg Romanik (DOI), Kaylee Allen (DOI)

II. Topics for Discussion:

A. ICF gave a presentation on Regional HCPs, ESA, and NEPA requirements. (Attached)

- Regional HCP's – how they work
- Examples of Approved HCPs
- CEQA/NEPA Compliance level of detail needs
- ESA level of detail needs
- BDCP Mitigation Approach

B. Discussion of EPA comments:

Topic 1: EPA is concerned that the relationship between the CM2 analysis and the current Reclamation planning efforts in Yolo Bypass are not clearly enough defined, including additional project-level analysis, relationship to BiOp, and if additional water would be needed to flood the bypass. Are impacts of CM2 are designed to offset impacts from CM1? [Note: For reference, a chart itemizing the 22 Conservation Measures is attached below, but was not presented at the meeting.]

Discussion Items:

- EPA concerned that there is less specificity in the BDCP than in the existing BiOp RPAs (Sec. 1.6 & 1.7). Due to this lack of specificity the EIS fails to disclose impacts to the public.
- EPA questions whether there was a sufficient record for NMFS and

USFWS to make determinations under ESA.

Topic 2: How will the forecasted benefits to resident and migratory fishes from CM2 and CM4 be estimated and compared to the potential adverse effects caused by CM1, CM2, and CM4?

Areas of Agreement:

- ICF explained that ESA Section 10 permits require CMs 1-22 (the construction of the facilities *plus* all the restoration projects) are inextricably linked as a package of conservation measures that *will be implemented together* to offset the collective impacts of all covered activities. Furthermore, these CMs will be implemented in "rough step" to keep up temporally with potentially adverse impacts, and to continually serve to offset the potentially adverse impacts.
- EPA has role under NEPA to evaluate the EISs regarding both compliance with NEPA as an informational document as well as whether the proposed federal action will have unacceptable environmental impacts; and under the Clean Water Act to assess whether beneficial uses are adequately protected consistent with the SWRCB's Bay Delta Water Quality Control Plan.
- The BDCP and BDCP EIR/S need to clearly outline the logic steps showing how CMs address covered species impacts related to CM1.
- BDCP and EIR/S need to be clear that through the Adaptive Management Plan, CMs can be modified if monitoring shows they are not as successful as anticipated in meeting the biological goals and objectives in the HCP.

Action Items:

- As identified in Technical Meetings 1-3, ICF is working on several action items that will improve the 'logic chain' between analyses and conclusions.

Topic 3: EPA concerned that BDCP and DEIR/EIS do not include adequate detail regarding export operations. In the south Delta, more detail is sought in regards to the Corps permit for SWP Banks operations and how BDCP use of that facility would meet Corps' goal of minimizing erosion. Additionally a description of CVP/SWP operations with and without each alternative should be included in Chapter 3 and add more detail to the north Delta bypass rules description. EPA also seeks clarification regarding E/I ratio used for BDCP.

Areas of Agreement:

- Documents should provide a good description of CVP/SWP Ops, in particular with regards to the No Action/Existing Conditions

Action Items:

- ICF will review description of operations in documents and provide additional detail.
- DWR will provide a response to EPA regarding the USACE permit.
- DWR will have CH2 contact EPA to discuss application of E/I ratio in BDCP modeling.

C. Review/Discussion of additional EPA comments

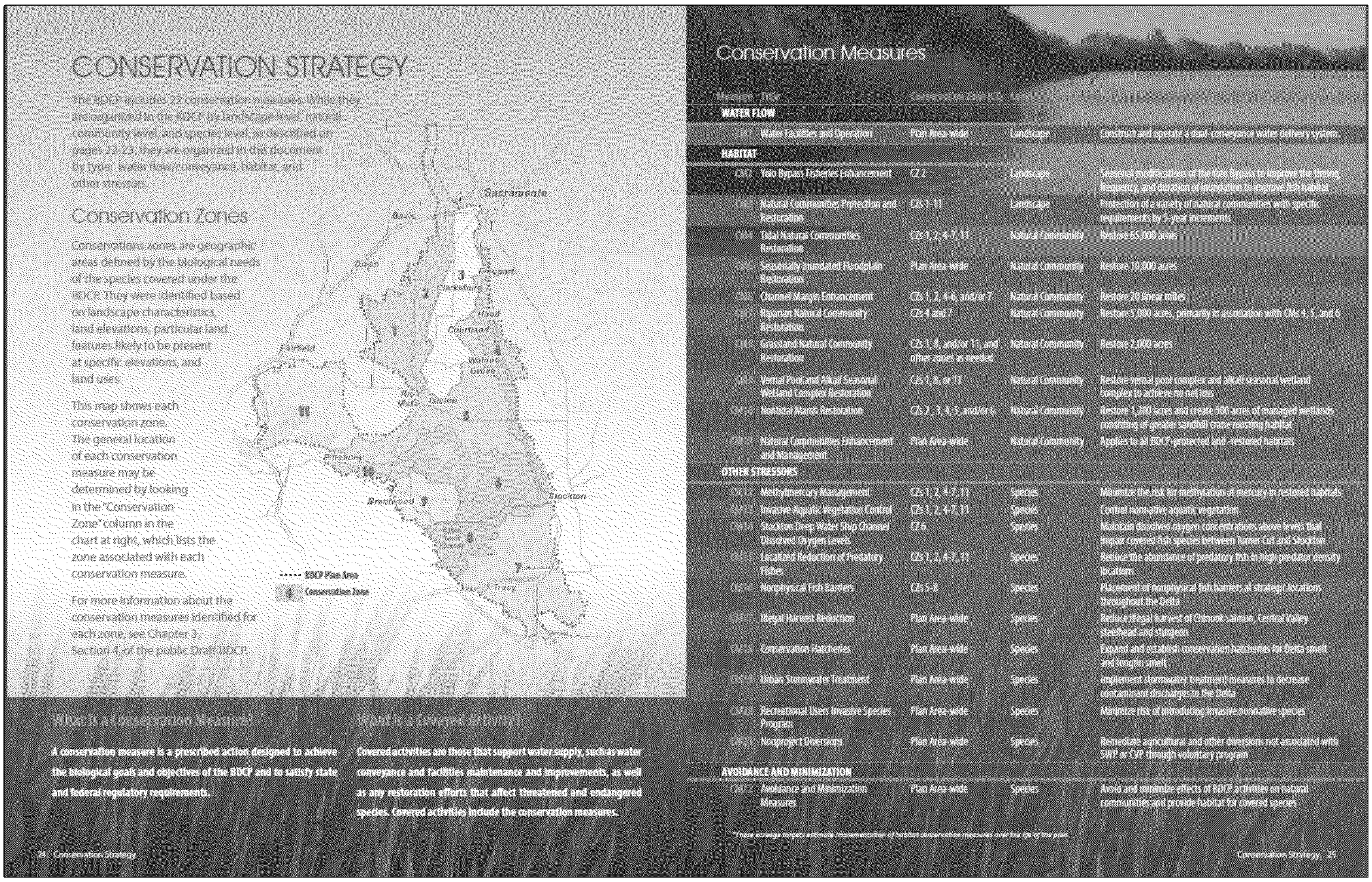
- EPA made reference to articles in the scientific literature that identified lessons learned about regional conservation planning approaches and adaptive management methods. [Note: For reference, several of these articles are cited below, but these articles were not discussed at the meeting.]
- DWR commented that the BDCP will have an Implementation Office and Governance Structure that will facilitate implementation, and that the Adaptive Management Program will be in-place to address uncertainty of CMs.

D. Review/Discussion of prior meeting summaries

- The group agreed that the meeting summaries accurately capture the dialogue fostered by the three technical meetings, and the action items that will be pursued by DWR/ICF as they prepare the Supplemental DEIS.
- DWR will revise meeting notes to incorporate USFWS comments on Technical meeting 3.
- Meeting notes and Action Items will be shared with Policy Group

III. Wrap-Up and Next Steps

- Policy Group to meet on January 15th
- DWR to share draft language (as described in Action Items) sometime around March, 2015



CONSERVATION STRATEGY

The BDCP includes 22 conservation measures. While they are organized in the BDCP by landscape level, natural community level, and species level, as described on pages 22-23, they are organized in this document by type: water flow/conveyance, habitat, and other stressors.

Conservation Zones

Conservations zones are geographic areas defined by the biological needs of the species covered under the BDCP. They were identified based on landscape characteristics, land elevations, particular land features likely to be present at specific elevations, and land uses.

This map shows each conservation zone. The general location of each conservation measure may be determined by looking in the "Conservation Zone" column in the chart at right, which lists the zone associated with each conservation measure.

For more information about the conservation measures identified for each zone, see Chapter 3, Section 4, of the public Draft BDCP.

What is a Conservation Measure?

A conservation measure is a prescribed action designed to achieve the biological goals and objectives of the BDCP and to satisfy state and federal regulatory requirements.

What is a Covered Activity?

Covered activities are those that support water supply, such as water conveyance and facilities maintenance and improvements, as well as any restoration efforts that affect threatened and endangered species. Covered activities include the conservation measures.

Conservation Measures

Measure	Title	Conservation Zone (CZ)	Level	
WATER FLOW				
CM1	Water Facilities and Operation	Plan Area-wide	Landscape	Construct and operate a dual-conveyance water delivery system.
HABITAT				
CM2	Yolo Bypass Fisheries Enhancement	CZ 2	Landscape	Seasonal modifications of the Yolo Bypass to improve the timing, frequency, and duration of inundation to improve fish habitat
CM3	Natural Communities Protection and Restoration	CZs 1-11	Landscape	Protection of a variety of natural communities with specific requirements by 5-year increments
CM4	Tidal Natural Communities Restoration	CZs 1, 2, 4-7, 11	Natural Community	Restore 65,000 acres
CM5	Seasonally Inundated Floodplain Restoration	Plan Area-wide	Natural Community	Restore 10,000 acres
CM6	Channel Margin Enhancement	CZs 1, 2, 4-6, and/or 7	Natural Community	Restore 20 linear miles
CM7	Riparian Natural Community Restoration	CZs 4 and 7	Natural Community	Restore 5,000 acres, primarily in association with CMs 4, 5, and 6
CM8	Grassland Natural Community Restoration	CZs 1, 8, and/or 11, and other zones as needed	Natural Community	Restore 2,000 acres
CM9	Vernal Pool and Alkali Seasonal Wetland Complex Restoration	CZs 1, 8, or 11	Natural Community	Restore vernal pool complex and alkali seasonal wetland complex to achieve no net loss
CM10	Nontidal Marsh Restoration	CZs 2, 3, 4, 5, and/or 6	Natural Community	Restore 1,200 acres and create 500 acres of managed wetlands consisting of greater sandhill crane roosting habitat
CM11	Natural Communities Enhancement and Management	Plan Area-wide	Natural Community	Applies to all BDCP-protected and -restored habitats
OTHER STRESSORS				
CM12	Methylmercury Management	CZs 1, 2, 4-7, 11	Species	Minimize the risk for methylation of mercury in restored habitats
CM13	Invasive Aquatic Vegetation Control	CZs 1, 2, 4-7, 11	Species	Control nonnative aquatic vegetation
CM14	Stockton Deep Water Ship Channel Dissolved Oxygen Levels	CZ 6	Species	Maintain dissolved oxygen concentrations above levels that impair covered fish species between Turner Cut and Stockton
CM15	Localized Reduction of Predatory Fishes	CZs 1, 2, 4-7, 11	Species	Reduce the abundance of predatory fish in high predator density locations
CM16	Nonphysical Fish Barriers	CZs 5-8	Species	Placement of nonphysical fish barriers at strategic locations throughout the Delta
CM17	Illegal Harvest Reduction	Plan Area-wide	Species	Reduce illegal harvest of Chinook salmon, Central Valley steelhead and sturgeon
CM18	Conservation Hatcheries	Plan Area-wide	Species	Expand and establish conservation hatcheries for Delta smelt and longfin smelt
CM19	Urban Stormwater Treatment	Plan Area-wide	Species	Implement stormwater treatment measures to decrease contaminant discharges to the Delta
CM20	Recreational Users Invasive Species Program	Plan Area-wide	Species	Minimize risk of introducing invasive nonnative species
CM21	Nonproject Diversions	Plan Area-wide	Species	Remediate agricultural and other diversions not associated with SWP or CVP through voluntary program
AVOIDANCE AND MINIMIZATION				
CM22	Avoidance and Minimization Measures	Plan Area-wide	Species	Avoid and minimize effects of BDCP activities on natural communities and provide habitat for covered species

*These acreage targets estimate implementation of habitat conservation measures over the life of the plan.

References about regional conservation planning and adaptive management

1. Regional Conservation Planning and Rare Plants (Witham et al., FREMONTIA, JAN 2014)
2. Six Common Mistakes in Conservation Priority Setting (Game et al., Conservation Biology, 2013)
3. Incorporating Climate Science in Applications of the U.S. Endangered Species Act for Aquatic Species (McClure et al., Conservation Biology, 2013)
4. Local Land-Use Planning to Conserve Biodiversity: Planners' Perspectives on What Works (Stokes et al., Conservation Biology, 2010)
5. Hitting the target and missing the point: target-based conservation planning in context (Carwardine et al., Conservation Biology, 2008)
6. *Adaptive Management of Natural Resources: Theory, Concepts, and Management Institutions* (Stankey et al., USDA-USFS General Technical Report).

http://www.fs.fed.us/pnw/pubs/pnw_gtr654.pdf